

Applicant : Timothy H. Bestor
Serial No.: 09/051,013
Filed : October 9, 1998
Page 2

Please amend claims 1-3, 6, 12-15 as follows:

-
1. (3X Amended) A chimeric protein for inhibiting the expression of a gene which comprises (1) a DNA methyltransferase whose DNA-binding activity is attenuated relative to that of naturally occurring DNA methyltransferase, and (2) a DNA binding protein linked thereto that binds to the gene's promoter sequence under conditions permitting the methylation of a methylation site within the promoter, thus inhibiting expression of the gene.
2. (Amended) The protein of claim 1, wherein the promoter sequence of the gene is a 5' long terminal repeat sequence of a human immunodeficiency virus-1 proviral DNA.
3. (Amended) The protein of claim 1, wherein the gene comprises a retroviral gene, an adenoviral gene, a foamy viral gene, a parvoviral gene, a foreign gene expressed in a cell, an over expressed gene, or a misexpressed gene.
-
6. (3X Amended) The chimeric protein of claim 1, wherein the DNA methyltransferase is a *Spiroplasma* MQ1 DNA methyltransferase (*M.SssI* DNA methyltransferase) whose DNA-binding activity is attenuated relative to that of naturally occurring *M.SssI* DNA methyltransferase, or a mutated mammalian DNA methyltransferase whose DNA binding activity is attenuated relative to that of naturally occurring mammalian DNA methyltransferase.
-
12. (2x Amended) The method of claim 11, wherein the gene is an endogenous gene.